

## **Chapter 6. How have patterns of AIDS diagnoses changed over time?**

To describe how patterns of AIDS diagnoses have changed over time, Chapter 6 presents a profile of annual AIDS diagnoses for the 12 year period of 1990 – 2001. While some of these changes over time may be due to reporting patterns, it also is likely that much of the change can be attributed to factors inherent in the epidemic and the response of the Massachusetts community to it. For instance, the initial steep rise in AIDS cases reflects the earlier years of the epidemic when less was known about the transmission of HIV, effective medical treatment did not exist, and less time elapsed between HIV infection and an AIDS diagnosis. The decreases in new AIDS diagnoses sustained across more recent years may reflect increased awareness about HIV and the prevention of its transmission. Additionally, the introduction of new highly active antiretroviral drugs after 1994 and increased access to them in Massachusetts, postponed the onset of AIDS among many individuals, causing a decrease in new diagnoses.

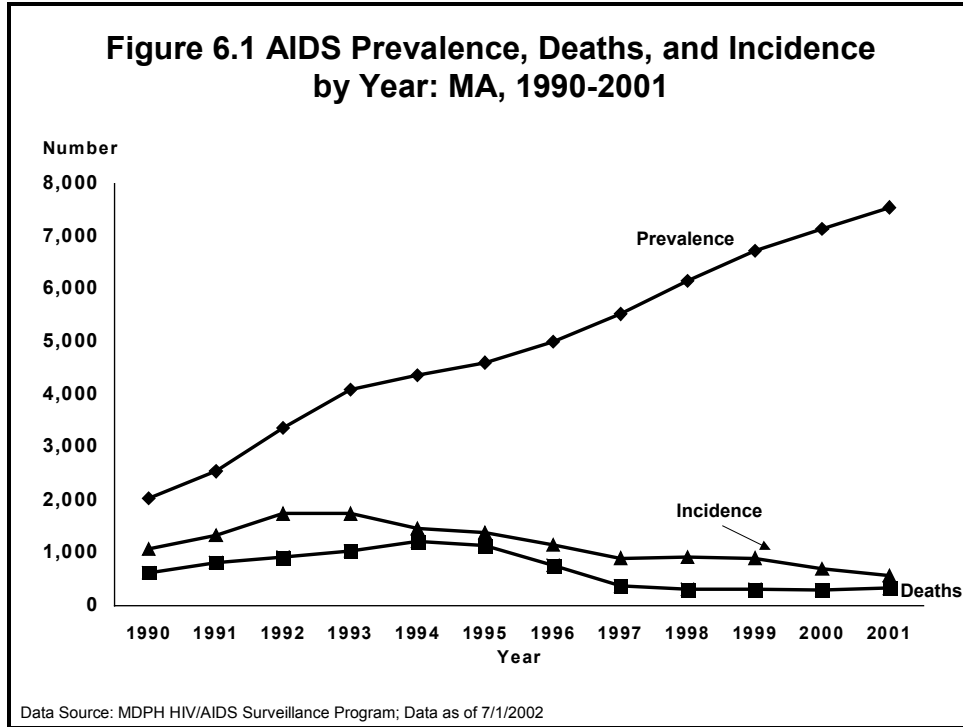
Thus, for more recent years of the epidemic, the AIDS trend data are not as closely tied to trends in HIV infection as they were in the earlier years when the time from HIV infection to AIDS diagnosis was shorter. Rather, annual AIDS diagnoses serve as a marker for increased levels of illness (i.e. morbidity) among people who are living with HIV infection.

While the AIDS trend data describe population based shifts in HIV related morbidity over time, they do not provide insight into what may be causing differential levels of morbidity experienced by various sub-populations. Information about the factors which contribute to differential morbidity is crucial to our understanding of the epidemic and is needed to help address gaps in services and to better understand who may be experiencing barriers to care, treatment and support services. The MDPH HIV/AIDS Bureau has initiated a clinical chart review of clients receiving care from ActNOW, a publicly funded primary care program for HIV positive persons in Massachusetts. The chart review enabled examination of medical histories for a large sample of these clients in order to help describe the factors that may promote differential morbidity and survival. Please see Chapter 8, “What is the profile of HIV positive people who utilize publicly funded services?” for a summary of these data.

## Section 1. People diagnosed with AIDS over time

<b>Table 6.1 People Living with AIDS<sup>1</sup> (Prevalence), Deaths among People Reported with AIDS (Deaths), and Newly Diagnosed AIDS Cases (Incidence) by Year: 1990-2001, MA</b>			
<b>Year</b>	<b>Prevalence</b>	<b>Deaths</b>	<b>Incidence</b>
1990	2,032	631	1,078
1991	2,549	814	1,331
1992	3,382	913	1,746
1993	4,094	1,041	1,753
1994	4,365	1,206	1,477
1995	4,617	1,142	1,394
1996	5,008	760	1,151
1997	5,532	375	899
1998	6,152	313	929
1999	6,735	314	896
2000	7,143	300	704
2001	7,545	327	569
<sup>1</sup> Number of People living with AIDS on 12/31 of each year Data source: MDPH HIV/AIDS Surveillance Program, Data as of 7/1/02			

- The number of people living with HIV/AIDS (“prevalence”) has been steadily increasing each year to 7,545 by the end of year 2001. (See Figure 6.1)
- After reaching a peak of 1,206 in 1994, AIDS deaths declined each year until 1998, when there were 313 deaths. However, from 1998-2001, the number of AIDS deaths has remained steady at about 300 deaths in each of these years.
- After reaching a plateau at around 900 cases each year from 1997-1999, AIDS incidence appears to have declined in 2000 and 2001. However, this drop should be interpreted with caution, as additional case finding throughout the coming year is likely to increase the number of diagnoses from these two years.



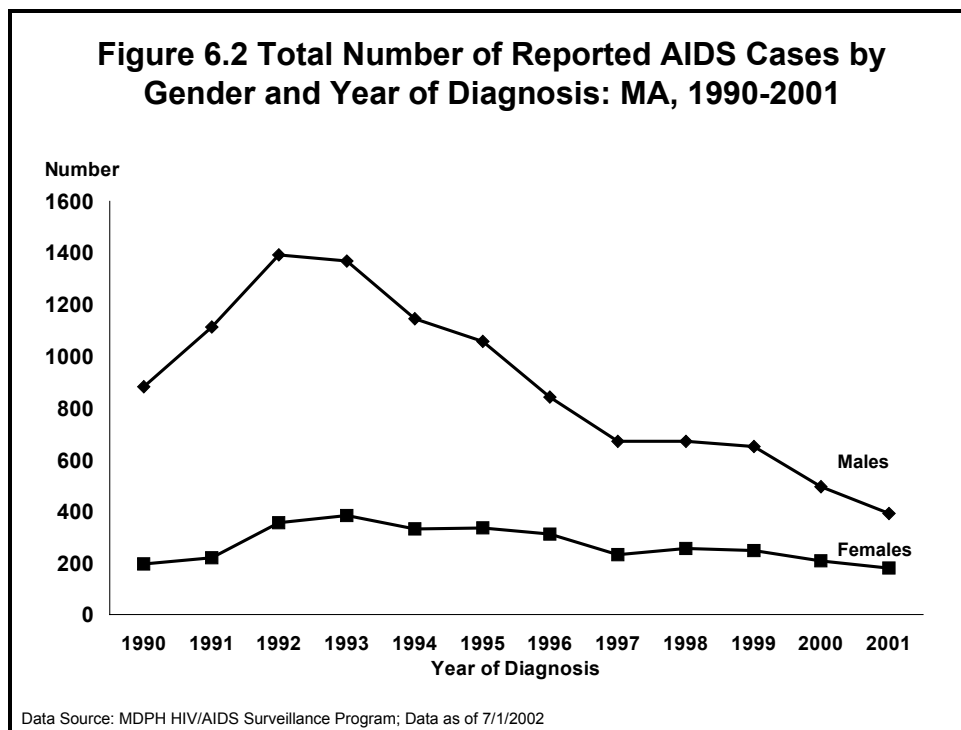
**Table 6.2 Total Reported AIDS cases, by Gender and Year of Diagnosis: MA, 1990 – 2001**

By Year:	Male		Female		Total
	N	%	N	%	
1990	883	82%	195	18%	1,078
1991	1,112	84%	219	16%	1,331
1992	1,392	80%	354	20%	1,746
1993	1,370	78%	383	22%	1,753
1994	1,145	78%	332	22%	1,477
1995	1,058	76%	336	24%	1,394
1996	841	73%	310	27%	1,151
1997	669	74%	230	26%	899
1998	672	72%	257	28%	929
1999	650	73%	246	27%	896
2000	495	70%	209	30%	704
2001	391	69%	178	31%	569

Data Source MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- Over time there has been a greater decline in AIDS diagnoses among men than among women (See Figure 6.2):
  - From 1993 to 1997, there was a 51% decline in the number of AIDS diagnoses among males and a 40% decline among females.

- From 1997 to 2001, there was a 42% decline in AIDS diagnoses among males and a 23% decline among females.
- The proportion of new AIDS diagnoses among women has increased over the past three years (from 27% in 1999 to 31% in 2001).



**Table 6.3 Total Number of Reported AIDS cases, by Race/Ethnicity and Year of Diagnosis: MA, 1990 - 2001**

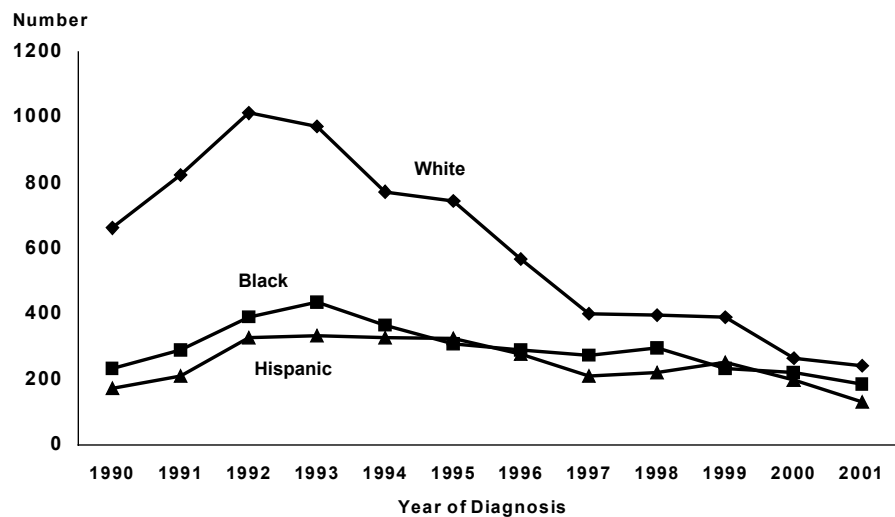
	White NH		Black NH		Hispanic		API		AI/AN		Total <sup>1</sup>
	N	%	N	%	N	%	N	%	N	%	N
1990	662	61%	235	22%	173	16%	4	0.4%	2	0.2%	<b>1,078</b>
1991	824	62%	289	22%	211	16%	4	0.3%	2	0.2%	<b>1,331</b>
1992	1,013	58%	393	23%	330	19%	8	0.5%	1	0.1%	<b>1,746</b>
1993	972	55%	435	25%	335	19%	6	0.3%	2	0.1%	<b>1,753</b>
1994	774	52%	365	25%	328	22%	5	0.3%	0	0.0%	<b>1,477</b>
1995	745	53%	309	22%	326	23%	5	0.4%	6	0.4%	<b>1,394</b>
1996	569	49%	292	25%	278	24%	7	0.6%	4	0.3%	<b>1,151</b>
1997	400	44%	275	31%	212	24%	11	1%	0	0.0%	<b>899</b>
1998	398	43%	297	32%	221	24%	12	1%	0	0.0%	<b>929</b>
1999	393	44%	235	26%	253	28%	12	1%	2	0.2%	<b>896</b>
2000	264	38%	221	31%	200	28%	18	3%	1	0.1%	<b>704</b>
2001	243	43%	185	33%	133	23%	7	1%	1	0.2%	<b>569</b>

<sup>1</sup> Total includes people of unspecified race/ethnicity

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

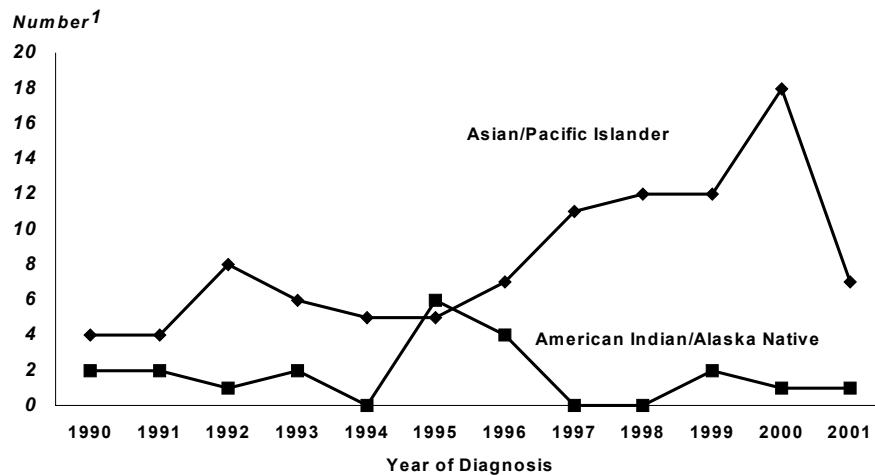
- In 2001, there were 243 (43%) Whites, 185 (33%) Blacks, 133 (23%) Hispanics, 7 (1%) Asian/Pacific Islanders, and 1(<1%) American Indian/Alaska Native newly diagnosed with AIDS.
- Whites make up the largest number of people diagnosed with AIDS each year across race/ethnicity in MA.
- From 1990 to 2001, the proportion of newly diagnosed AIDS cases that are among people of color increased from 39% to 57%.
- After peaking in 1992, the number of Whites diagnosed with AIDS decreased by 76% (from 1,013 in 1992 to 243 in 2001). After peaking in 1993, the number of Blacks diagnosed with AIDS decreased by 57% (from 435 in 1993 to 185 in 2001) and the number of Hispanics diagnosed with AIDS decreased by 60% (from 335 in 1993 to 133 in 2001). (See Figure 6.3)

**Figure 6.3 Total Number of Reported AIDS Cases by Race/Ethnicity and Year of Diagnosis: MA, 1990-2001**



Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2002

**Figure 6.4 Total Number of Reported AIDS Cases for Asian/Pacific Islanders and American Indian/Alaska Natives by Year of Diagnosis: MA, 1990-2001**



<sup>1</sup> Note that scale reflects much smaller numbers than all other figures  
Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 7/1/2002

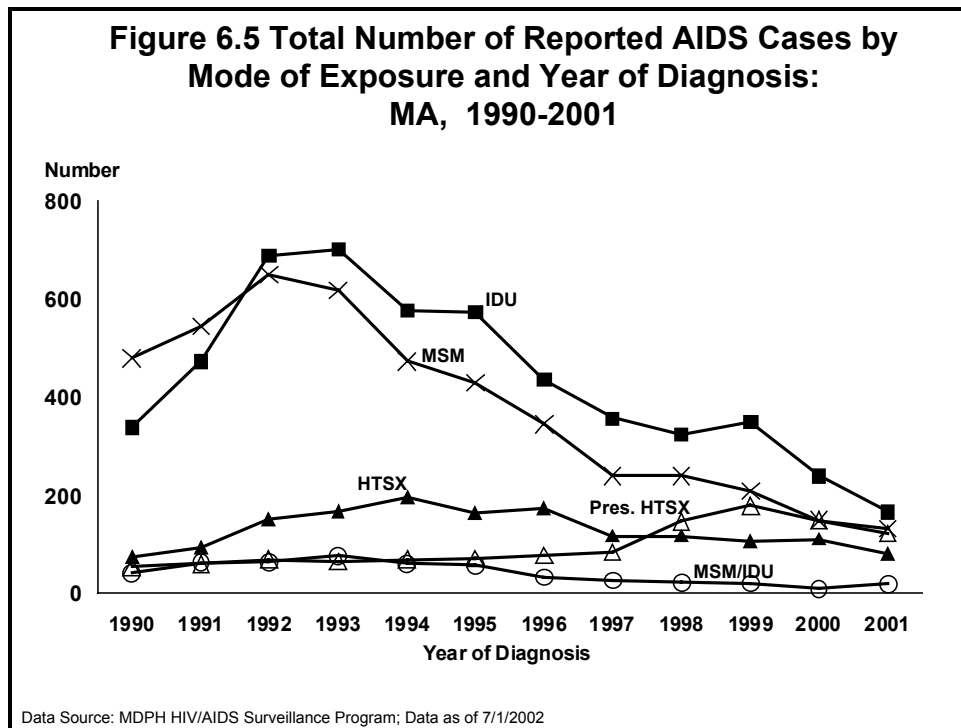
**Table 6.4 Number and Percent of Reported AIDS Cases by Exposure Mode<sup>1</sup> and Year of Diagnosis: MA, 1990-2001**

	MSM		IDU		MSM/ IDU		HTSX		Pres. HTSX		Other		NIR		To- tal
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	
1990	479	44%	339	31%	43	4%	75	7%	55	5%	58	5%	29	3%	<b>1,078</b>
1991	546	41%	474	36%	63	5%	92	7%	61	5%	57	4%	38	3%	<b>1,331</b>
1992	650	37%	688	39%	65	4%	152	9%	70	4%	85	5%	36	2%	<b>1,746</b>
1993	619	35%	701	40%	77	4%	168	10%	66	4%	55	3%	67	4%	<b>1,753</b>
1994	473	32%	576	39%	62	4%	196	13%	69	5%	28	2%	73	5%	<b>1,477</b>
1995	429	31%	574	41%	59	4%	165	12%	71	5%	36	3%	60	4%	<b>1,394</b>
1996	346	30%	436	38%	34	3%	173	15%	78	7%	35	3%	49	4%	<b>1,151</b>
1997	241	27%	357	40%	27	3%	118	13%	85	9%	19	2%	52	6%	<b>899</b>
1998	239	26%	325	35%	23	2%	117	13%	148	16%	18	2%	59	6%	<b>929</b>
1999	208	23%	350	39%	22	2%	108	12%	179	20%	4	0%	25	3%	<b>896</b>
2000	149	21%	239	34%	10	1%	112	16%	149	21%	9	1%	36	5%	<b>704</b>
2001	133	23%	166	29%	19	3%	79	14%	123	22%	10	2%	39	7%	<b>569</b>

<sup>1</sup> See the Glossary for an explanation of Exposure Mode categories. MSM = male-to-male sex; IDU = injection drug use; MSM/IDU = male-to-male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- From 1993 to 2001 the number of new AIDS diagnoses declined for each exposure mode, except presumed heterosexual, which increased during this time period. (See Figure 6.5)
- In 1992, the number of new AIDS diagnoses with injection drug use as the reported exposure mode (N=688) surpassed the number of AIDS diagnoses with male-to-male sex as the reported exposure mode (N=650), and this shift has been sustained through 2001.
- The proportion of new AIDS diagnoses that have male-to-male sex as the reported exposure mode has declined from 1990 (44%) to 2001 (23%).
- From 1990 to 2001, the percentage of new AIDS diagnoses with injection drug use as the reported exposure mode has fluctuated between 29% and 41%.

*Note: the category of presumed heterosexual is created to re-assign people who are reported with no identified risk but who are known to have denied all other risks except the possibility of heterosexual sex with a partner of unknown HIV status or risk. As such, it is still not clear what the exposure risk is for people in this category and any comparisons should be interpreted with caution.*



**Table 6.5 Percentage Distribution of Reported AIDS Cases by Exposure Mode<sup>1</sup> and Year of Diagnosis Among Males: MA, 1990-2001**

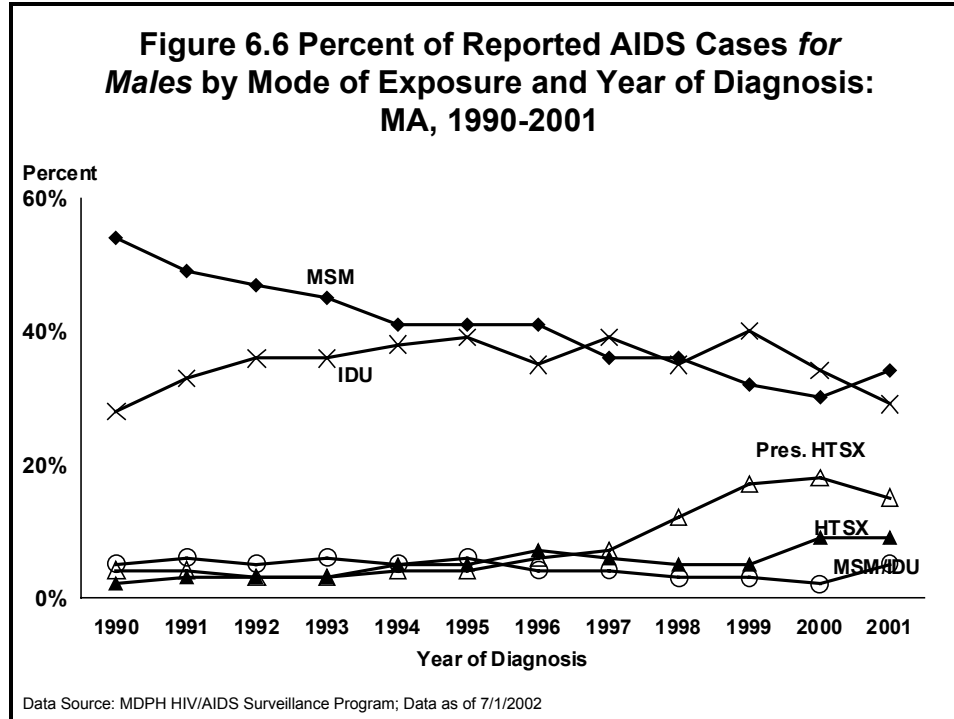
Year	MSM	IDU	MSM/ IDU	HTSX	Pres. HTSX	Other	NIR	Total
1990	54%	28%	5%	2%	4%	4%	3%	883
1991	49%	33%	6%	3%	4%	4%	3%	1,112
1992	47%	36%	5%	3%	3%	5%	2%	1,392
1993	45%	36%	6%	3%	3%	3%	4%	1,370
1994	41%	38%	5%	5%	4%	2%	5%	1,145
1995	41%	39%	6%	5%	4%	2%	5%	1,058
1996	41%	35%	4%	7%	6%	2%	5%	841
1997	36%	39%	4%	6%	7%	1%	6%	669
1998	36%	35%	3%	5%	12%	1%	8%	672
1999	32%	40%	3%	5%	17%	0%	3%	650
2000	30%	34%	2%	9%	18%	1%	6%	495
2001	34%	29%	5%	9%	15%	1%	8%	391

<sup>1</sup> See the Glossary for an explanation of Exposure Mode categories. MSM = male-to-male sex; IDU = injection drug use; MSM/IDU = male-to-male sex and injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk..

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The proportion of new AIDS diagnoses with male-to-male sex as the reported exposure mode has declined from 1990 (54%) to 2001 (34%). (See Figure 5.7)

- From 1990 to 2000, the proportion of new AIDS diagnoses in men with male-to-male sex as the reported exposure mode has fluctuated between 54% and 30%. (See Figure 6.6)

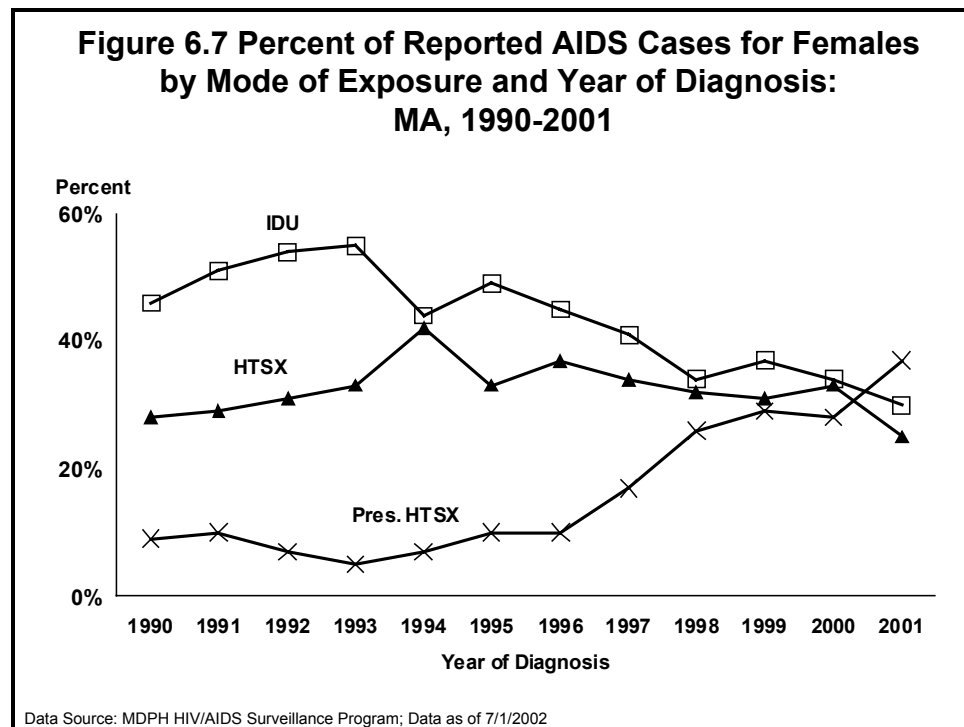


**Table 6.6 Percent of Reported AIDS Cases by Exposure Mode<sup>1</sup> and Year of Diagnosis Among Females: MA, 1990-2000**

Year	IDU	HTSX	Pres. HTSX	Other	NIR	Total
1990	46%	28%	9%	13%	3%	195
1991	51%	29%	10%	6%	4%	219
1992	54%	31%	7%	5%	3%	354
1993	55%	33%	5%	5%	3%	383
1994	44%	42%	7%	3%	5%	332
1995	49%	33%	10%	5%	3%	336
1996	45%	37%	10%	5%	3%	310
1997	41%	34%	17%	4%	4%	230
1998	34%	32%	26%	4%	3%	257
1999	37%	31%	29%	1%	2%	246
2000	34%	33%	28%	2%	3%	209
2001	30%	25%	37%	3%	4%	178

<sup>1</sup> See the Glossary for an explanation of Exposure Mode categories. IDU = injection drug use; HTSX = heterosexual sex; Pres. HTSX = presumed heterosexual; NIR = No Identified Risk; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 7/1/02

- The proportion of new AIDS diagnoses in females with injection drug use as an exposure mode has decreased from 1993 (55%) to 2001 (30%). (See Figure 6.7)
- From 1990 to 2000, injection drug use was the exposure mode for the largest percentage of new AIDS diagnoses among females. In 2001, presumed heterosexual sex accounted for the largest percentage of new AIDS diagnoses at 37%.
- The percentage of new AIDS diagnoses among females with a presumed exposure of heterosexual sex increased from 1995 (10%) to 2001 (37%).



*Note: the category of presumed heterosexual is created to re-assign people who are reported with no identified risk but who are known to have denied all other risks except the possibility of heterosexual sex with a partner of unknown HIV status or risk. As such, it is still not clear what the exposure risk is for people in this category and any comparisons should be interpreted with caution*